

Appl. No. 10/707,161

Amdt. Dated May 9, 2006

Reply to Office Action of Feb. 9, 2006

Amendments to the Specification:

Please amend the specification as follows:

[0008] In order to achieve the object set out above, a broadband light source in accordance with the present invention includes a pump laser for producing a pump light, a lanthanide series element-doped fiber with a predetermined length which can achieve light ~~amplification~~ gain by stimulated radiation, a wavelength division multiplexer (WDM) device with at least three ports, and first and second optical isolators. Two ports of the WDM device respectively connect with the pump laser and the fiber. The first optical isolator connects with a third port of the WDM device. The second optical isolator connects with the fiber. The first and second optical isolators are located in an output passing of the broadband light source for reducing reflection of output light. The pump light is coupled to the fiber by the WDM device. The pump light excites spontaneous-radiation light within the fiber. ~~The pump light is amplified by the fiber.~~ A part of the ~~amplified~~ spontaneous-radiation light passes the second optical isolator and is exported. A remaining part of the ~~amplified~~ spontaneous-radiation light which is coupled to the first isolator by the WDM device is exported via an output end of the first isolator.

[0010] FIG. 1 is a schematic view of a ~~conventional~~ broadband light source in accordance with an embodiment of the present invention;

[0011] FIG. 2 is a ~~schematic view of another conventional broadband light source~~ graph showing a relationship between output power and a length of an erbium-doped fiber of the broadband light source of FIG. 1;

[0012] FIG. 3 is a schematic view of a conventional broadband light source ~~in accordance with the present invention;~~ and

[0013] FIG. 4 is a ~~graph showing a relationship between output power and a~~

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~~length of an erbium-doped fiber of the~~ schematic view of another conventional
broadband light source of FIG. 3.

[0018] It is noted that the erbium-doped fiber 22 of the present invention can be replaced by any of various other lanthanide series element-doped ~~fiber~~ fibers that can achieve light ~~amplification~~ gain by stimulated radiation. For example, a praseodymium-doped fiber can be used.